UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/897,429	07/03/2001	Robert J. Hales	H0630-0003-P003	8337

64884 7590 03/16/2009

BERGMAN & SONG, LLP
P.O. BOX 400198
CAMBRIDGE, MA 02140

EXAMINER	
PROCTOR, JASON SCOTT	
ART UNIT	**PAPER NUMBER**
2123	

MAIL DATE	DELIVERY MODE
03/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/897,429	HALES, ROBERT J.	
	Examiner	Art Unit	
	JASON PROCTOR	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16 and 31-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1, 3-16, and 31-40 were rejected in the Office Action entered on 1 August 2008.

Applicants' response submitted on 2 February 2009 has amended claims 1, 13, 36, and 39. Claims 1, 3-16, and 31-40 are pending in this application.

Claims 1, 3-16, and 31-40 are rejected.

Priority

1. Applicant's claim for domestic priority under 35 U.S.C. § 119(e) is acknowledged. The Examiner thanks Applicants for clarifying where support for the claims is found.

Applicants have submitted (27 July 2005) that:

> Support is believed to exist in the '303 and '040 applications for each of the now-pending claims. [...] Thus, it is believed that enabling support is found in the '303 application for claim 10, and for the same or similar reasons the '303 and '040 applications are believed to fully support the balance of the now-pending claims.

Applicants' arguments have established that the '303 and '040 application fully support the pending claims.

Claim Interpretation

2. Regarding the phrase "substantially instantaneously identical" as recited by claim 13, Applicants have submitted (27 July 2005) that:

> One of skill in the art would readily appreciate that the meaning of the term "substantially instantaneously identical" reflects the context of the system in which the term is used. Thus for example where data is mirrored on two servers, as a practical matter, the same data is available to users of both servers on a timeframe that is otherwise compatible with system operation. As such, one of skill in the art would understand the subject claim limitation without the expression of an absolute time span.

3. Regarding the phrase "detail drawing" as recited by claim 1 and others, the Examiner provided an interpretation in the previous Office Action. In response, Applicants submit (28 February 2007) that:

> In relation to the phrase "detail drawing," section 16.1 of provisional application 60/236,040 states that "[t]o create a new detail drawing... a dialog box will appear asking if you want to, 'Create a new detail drawing?' You will then be prompted to name the detail drawing..." Applicant respectfully submits that the term "detail drawing" thus refers to a discrete entity that can be "separately identified." The detail drawing is therefore not a functional equivalent of merely magnifying (zooming in on) an otherwise existing entity.

Additionally, the claim language has been amended to read "a separately identified detail drawing" (claim 1) and "a separately identified detailed layout" (claim 13). Applicants' interpretation is acknowledged.

4. Regarding the phrase "markup lines" as recited by claim 21, Applicants submit (28 February 2007) that "the term 'markup line' refers to a visual indication of a change proposed or made to a plan record." The Examiner thanks Applicants for this clarification. Applicants' interpretation is acknowledged.

Response to Arguments - 35 USC § 112

5. In response to the previous rejection of claims 39 and 40 under 35 U.S.C. § 112, second paragraph, Applicants argue primarily that:

> Claim 39 is amended, as indicated above, to more clearly define the invention. The rejection under 35 U.S.C § 112, second paragraph is, accordingly, overcome.

The previous rejection is withdrawn in response to the amendments to claim 39. New grounds of rejection are entered below.

The previous rejection of claim 40 under 35 U.S.C. § 112, second paragraph, is maintained because the present amendments to claim 39 do not address the previously noted deficiencies of claim 40.

Response to Arguments - 35 USC § 103

6. In response to the previous rejection of claims 1, 3-16, and 31-35 under 35 U.S.C. § 103(a) as being unpatentable over "CADDstar Version 5.0 Help Manual" by Hal-Tec Corporation (also the assignee of this patent application) in view of US Patent No. 5,821,937 to Tonelli et al. ("Tonelli"), Applicants argue primarily that:

> Applicant respectfully submits that the features of "calculating an optical loss, including a loss associated with an optical fiber splice" is in no way taught or suggested by the CADDstar version 5.0 help manual. Nor does the combination of the Help Manual with Tonelli, or with any other reference of record, remedy this deficiency.

The Examiner respectfully traverses this argument as follows.

The "CADDstar Version 5.0 Help Manual" by Hal-Tec Corporation **explicitly discloses calculating an optical loss, including a loss associated with an optical fiber splice** as claimed. See the Help Manual, section "10.17 Splicing Optical Fibers". Compare **Figure 10.17.3** "Fiber Splicing Dialog Box" showing a "Loss" column that is blank to **Figure 10.17.1** showing a "Loss" column with **calculated optical loss associated with an optical fiber splice**.

Applicants may consider submitting affidavits under 37 CFR 1.132 when alleging that the prior art created by the assignee of this application fails to teach or disclose the claimed invention.

Applicants' argument has been fully considered but has been found unpersuasive.

7. Applicants further argue that:

> Applicant also respectfully submits that there is nothing in the Help Manual to teach or suggest the claim 13 features of:
> a first computer including a first memory storage device having application software encoded therein; a second computer operatively connected to said first computer, having a second memory storage device adapted to record first project data; a third computer, operatively connected to said second computer, having a third memory storage device adapted to record second project data, said first and second project data being substantially instantaneously identical.

The Examiner respectfully traverses this argument as follows.

It appears that Applicants allege that the Help Manual in view of Tonelli does not teach the arrangement of a first computer, a second computer, and a third computer as claimed (rather than alleging that the prior art fails to teach, for example, "said first and second project data being substantially instantaneously identical").

The "CADDstar Version 5.0 Help Manual" teaches in section "1.1 Recommended Hardware" that the computer system have a "Dedicated outside phone line with 28.8 baud modem and communications software". The Help Manual further teaches that the system has "Fully integrated facilities management package of Drafting, RF/Coaxial Design, and Fiber Design modules [that] allow for landbase drafting, digitizing, and design to be performed in one step" further teaches that the system has "Automated graphic update, of database attributes changed outside of CADDStar Map using a database manager (e.g. Oracle), upon map retrieval." In light of these teachings and the knowledge of a person of ordinary skill in the art at the time of Applicants' invention, it would have been obvious to that person that different components of the system may be embodied on **different computers** in communication using the **recommended dedicated phone line, modem, and communications software** in order to implement the disclosed features of **automatic graphic updates of database attributes**. These teachings render obvious the claimed features referred to in Applicants' arguments.

Applicants' argument has been fully considered but has been found unpersuasive.

8. Regarding the previous rejection of claims 13, 14, and 16 under 35 U.S.C. § 103(a) as being unpatentable over "Modeling Multiple View of Design Objects in a Collaborative CAD Environment" by Rosenman in view of US Patent No. 6,499,006 to Rappaport et al. ("Rappaport") in view of US Patent No. 5,821,937 to Tonelli et al. ("Tonelli"), Applicants argue primarily that:

> The Office Action relies on Rappaport for any teaching of ["calculating power and signal relationships within ... communications network components"] and acknowledges that such teaching is absent from Rosenman and Tonelli. Applicant respectfully submits, however, that there is nothing in Rappaport to teach or suggest the same features of calculating "relationships within ... communications network components."
> To the contrary, Rappaport is entirely directed to a system for 3-dimensional display of wireless communication system performance. The cited discussion of Rappaport relates to a "designated region" and to a "computer [which] then calculates the selected wireless system performance predictive model on the region," (emphasis added by Applicants). This in no way teaches or suggests the claim 13 features of calculating "relationships within ... communications network components.

The Examiner respectfully traverses this argument as follows.

Unlike claims 1, 36, and 39, independent claim 13 does not recite a "fiber optic" network or components. Applicants admit that Rappaport calculates "communication system performance". Rappaport explicitly discloses that the model predicts the communication system performance using a model comprising "various wireless system hardware components, such as antennas (point, omnidirectional, directional, leaky feeder, etc.), transceivers, amplifiers, cables, splitters, and the like, and allows the user to visualize, in three-dimensions, the effects of their placement and movement on overall system performance throughout the modeled environment." (Rappaport, column 4, lines 13-32).

Therefore, Rappaport clearly teaches a calculations portion "being adapted to calculate power and signal relationships within said communications network components" as recited by

claim 13. Further, ***calculating*** power and signal relationships within said communications network components ***is not required by the claim language***. Instead, the prior art is merely required to "be adapted to" perform that function.

Applicants' argument has been fully considered but has been found unpersuasive.

9. Applicants submit similar arguments for claim 15, which are traversed as shown above.

10. Regarding the previous rejection of claims 1, 3-6 and 36-40 under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport et al. ("Rappaport") in view of US Patent No. 5,821,937 to Tonelli et al. ("Tonelli"); and

11. Regarding the previous rejection of claims 7-9, 12, and 31-35 under 35 U.S.C. § 103(a) as being unpatentable over Rappaport in view of Tonelli, further in view of US Patent No. 4,866,704 to Bergman ("Bergman"); and

12. Regarding the previous rejection of claims 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Rappaport in view of Tonelli, further in view of US Patent No. 5,761,432 to Bergholm ("Bergholm");

Applicants argue primarily that the prior art indicated above fails to teach or suggest the claimed features "calculating an optical loss, including a loss associated with … an optical fiber splice" recited in independent claims 1, 36, and 39.

This argument has been fully considered and found persuasive. Accordingly, the previous rejections have been withdrawn.

The "CADDstar Verion 5.0 Help Manual" reference by Hal-Tec Corporation teaches these limitations. New grounds of rejection have been entered below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 39-40 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 39 recites in relevant part:

> said network components represented within the integrated detail drawing being coupled to receive information otherwise represented on the visible image

which renders the claim vague and indefinite. Claim 39 is a method claim but this language neither describes nor further limits any method step. This language appears to be purely descriptive or to describe an intended use of the method. It is unclear whether this language limits the scope of the method.

Further, it is unclear whether the method is limited to "said network components" ***receiving*** "information otherwise represented on the visible image" or instead, said network components are merely ***capable*** of receiving said information. If the claim is limited to the former, the claim language is vague and indefinite for failing to point out and particularly claim the invention. If the claim is not so limited, it is unclear how to determine whether a network component is capable of receiving, or "coupled to receive" information, and the claim is vague

and indefinite because a person of ordinary skill in the art cannot reasonably ascertain the scope of the invention.

14. Claim 40 recites the limitation "said treating said network components … as contiguous" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 40 recites "said treating … includes providing full connectivity for signal levels and design connections" which renders the claim vague and indefinite. It is unclear what is meant by "providing full connectivity" between "network components" in an integrated detail drawing and "information otherwise represented in the visible image", where the components and information are apparently non-contiguous but are treated as being contiguous. There appears to be specific claim language that these elements are not connected (i.e. in a separately identified detail drawing) but are treated as being connected ("contiguous") yet also have full connectivity. There appears to be missing elements or unclear claim language.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. **Claims 1, 3-6, and 36-40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport et al. in view of US Patent No. 5,821,937 to**

Tonelli et al., further in view of "CADDstar Version 5.0 Help Manual" by Hal-Tec Corporation.

Regarding claim 1, Rappaport teaches a method for deploying a fiber optic communication network (column 1, lines 25-48) comprising:

Storing an attribute of an optical communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Selecting and reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Forming a visible image representing said planned deployment (column 4, lines 33-50).

Tonelli teaches forming a visible image representing a planned deployment of a physical instance of a component, said visible image including a separately identified integrated detail drawing [(FIG. 31); *"For example, devices and media connections may be grouped into collections (logical partitions) to simplify working with complex network designs. Physically, a collection is a design sheet. Multiple collections may be linked to each other via off-page connections between their corresponding design sheets. Each collection is represented as an icon when collapsed, and when the user double clicks the left mouse button on an icon, the design sheet corresponding to the icon is displayed in the application window. Referring to FIG. 31, the devices and media connections on each floor of an office building 326 are grouped into*

separate collections 320, 322, 324. The user imported a country map 328 and populated the country map with multiple building collections 326, 330, 332. The user may also import a world map and populate it with country collections (not shown). Design sheets are hierarchical." (column 15, lines 22-67)]

"CADDstar Version 5.0 Help Manual" teaches calculating an optical loss, including a loss associated with an optical fiber splice (See in particular section "10.17 Splicing Optical Fibers"; and Figures 10.17.3 and 10.17.1 showing "Loss" calculated for a plurality of fiber optic splices).

Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" are analogous art because all are drawn to network design tools.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Tonelli and Rappaport by incorporating the features shown in Tonelli FIG. 31 and described in Tonelli column 15 with the design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of Tonelli, such as to design or maintain a complex network layout with the ability to view details down to the individual device [*"An important aspect of designing and maintaining networks is being able to quickly assess the current network configuration down to the device configuration level. Such information is helpful in troubleshooting network problems and in updating a network system."* (Tonelli, column 2, lines 16-22)].

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of "CADDstar Version 5.0 Help Manual" with Rappaport in view of Tonelli by combining the optical fiber splice loss calculation with the

design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of "CADDstar Version 5.0 Help Manual" such as to have *"fully integrated facilities management of drafting, RF/Coaxial design, and fiber design to allow for landbase drafting, digitizing, and design"* (CADDstar, section "1.0 CADDStar Map Overview").

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" to arrive at the invention specified in claim 1.

Regarding claim 3, Rappaport teaches a computer-implemented method (column 4, lines 33-50) and recording associations in a computer database (column 6, lines 40-49).

Regarding claim 4, Rappaport does not explicitly teach physically deploying a physical instance of the component. However, Rappaport does teach a network design tool (column 5, lines 57-65; column 8, lines 23-35) and therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to physically deploy the network after it has been designed.

Regarding claims 5 and 6, Rappaport teaches identifying a geographic location for the network and displaying a graphical representation of the geographic location (column 4, lines 3-9; column 4, lines 33-38; column 8, lines 44-57).

Regarding claim 36, Rappaport teaches a method for deploying a fiber optic communication network (column 1, lines 25-48) comprising:

Storing an attribute of an optical communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Selecting and reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Forming a visible image representing said planned deployment (column 4, lines 33-50).

Tonelli teaches forming a visible image representing a planned deployment of a physical instance of a component, said visible image including a separately identified integrated detail drawing [(FIG. 31); *"For example, devices and media connections may be grouped into collections (logical partitions) to simplify working with complex network designs. Physically, a collection is a design sheet. Multiple collections may be linked to each other via off-page connections between their corresponding design sheets. Each collection is represented as an icon when collapsed, and when the user double clicks the left mouse button on an icon, the design sheet corresponding to the icon is displayed in the application window. Referring to FIG. 31, the devices and media connections on each floor of an office building 326 are grouped into separate collections 320, 322, 324. The user imported a country map 328 and populated the country map with multiple building collections 326, 330, 332. The user may also import a world*

map and populate it with country collections (not shown). Design sheets are hierarchical." (column 15, lines 22-67)].

Tonelli teaches performing a system calculation considering small-scale features represented in the detail drawing and large-scale features otherwise represented in the visible image [*"Network Audit Software"* (column 18, line 11 – column 22, line 25) describes several "system calculations". The network components (in any of the hierarchical displays) are included in the system calculations. Alternatively, Tonelli teaches various steps of "validating" the network configuration, for example (column 17, lines 11-17)].

"CADDstar Version 5.0 Help Manual" teaches calculating an optical loss, including a loss associated with an optical fiber splice (See in particular section "10.17 Splicing Optical Fibers"; and Figures 10.17.3 and 10.17.1 showing "Loss" calculated for a plurality of fiber optic splices).

Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" are analogous art because all are drawn to network design tools.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Tonelli and Rappaport by incorporating the features shown in Tonelli FIG. 31 and described in Tonelli column 15 with the design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of Tonelli, such as to design or maintain a complex network layout with the ability to view details down to the individual device [*"An important aspect of designing and maintaining networks is being able to quickly assess the current network configuration down to the device configuration level. Such*

information is helpful in troubleshooting network problems and in updating a network system." (Tonelli, column 2, lines 16-22)].

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of "CADDstar Version 5.0 Help Manual" with Rappaport in view of Tonelli by combining the optical fiber splice loss calculation with the design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of "CADDstar Version 5.0 Help Manual" such as to have *"fully integrated facilities management of drafting, RF/Coaxial design, and fiber design to allow for landbase drafting, digitizing, and design"* (CADDstar, section "1.0 CADDStar Map Overview").

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" to arrive at the invention specified in claim 36.

Regarding claims 37 and 38, Rappaport teaches a calculations portion adapted to calculate power and signal relationships within a communications network (column 7, lines 10-27, etc.).

Regarding claim 39, Rappaport teaches a method for deploying a fiber optic communication network (column 1, lines 25-48) comprising:

Storing an attribute of an optical communication component in a catalog database entry (column 4, lines 46-50; column 6, lines 36-60) referred to as a computer parts database;

Associating the catalog database entry with a design profile (column 6, lines 40-44; column 8, lines 23-35);

Selecting and reading the attribute from the database entry (column 6, lines 40-44);

Associating the attribute with a planned deployment of a physical instance of the component (column 8, lines 23-35); and

Forming a visible image representing said planned deployment (column 4, lines 33-50).

Tonelli teaches forming a visible image representing a planned deployment of a physical instance of a component, said visible image including a separately identified integrated detail drawing [(FIG. 31); *"For example, devices and media connections may be grouped into collections (logical partitions) to simplify working with complex network designs. Physically, a collection is a design sheet. Multiple collections may be linked to each other via off-page connections between their corresponding design sheets. Each collection is represented as an icon when collapsed, and when the user double clicks the left mouse button on an icon, the design sheet corresponding to the icon is displayed in the application window. Referring to FIG. 31, the devices and media connections on each floor of an office building 326 are grouped into separate collections 320, 322, 324. The user imported a country map 328 and populated the country map with multiple building collections 326, 330, 332. The user may also import a world map and populate it with country collections (not shown). Design sheets are hierarchical."* (column 15, lines 22-67)].

Tonelli teaches treating said network components represented within the integrated detail drawing as contiguous with information otherwise represented on the visible image (column 15, lines 22-67)].

"CADDstar Version 5.0 Help Manual" teaches calculating an optical loss, including a loss associated with an optical fiber splice (See in particular section "10.17 Splicing Optical Fibers"; and Figures 10.17.3 and 10.17.1 showing "Loss" calculated for a plurality of fiber optic splices).

Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" are analogous art because all are drawn to network design tools.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Tonelli and Rappaport by incorporating the features shown in Tonelli FIG. 31 and described in Tonelli column 15 with the design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of Tonelli, such as to design or maintain a complex network layout with the ability to view details down to the individual device [*"An important aspect of designing and maintaining networks is being able to quickly assess the current network configuration down to the device configuration level. Such information is helpful in troubleshooting network problems and in updating a network system."* (Tonelli, column 2, lines 16-22)].

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of "CADDstar Version 5.0 Help Manual" with Rappaport in view of Tonelli by combining the optical fiber splice loss calculation with the design tool taught by Rappaport. Motivation to combine the references is found in the express teachings of "CADDstar Version 5.0 Help Manual" such as to have *"fully integrated facilities management of drafting, RF/Coaxial design, and fiber design to allow for landbase drafting, digitizing, and design"* (CADDstar, section "1.0 CADDStar Map Overview").

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Rappaport, Tonelli, and "CADDstar Version 5.0 Help Manual" to arrive at the invention specified in claim 39.

Regarding claim 40, Tonelli teaches including providing full connectivity for signal levels and design connections (column 15, lines 22-67).

17. **Claims 7-9, 12, and 31-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport in view of US Patent No. 5,821,937 to Tonelli, further in view of "CADDstar Version 5.0 Help Manual" by Hal-Tec Corporation as applied to claims 1 and 5 above, and further in view of US Patent No. 4,866,704 to Bergman.**

Regarding claims 7-9, 12, and 31-35, Rappaport in view of Tonelli does not explicitly teach the fiber optic equipment recited by these claims.

Bergman teaches the fiber optic equipment recited by these claims (title, abstract, columns 1-2, etc.).

Bergman and Rappaport in view of Tonelli, further in view of "CADDstar Version 5.0 Help Manual" are analogous art because both are drawn to communications networks.

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of the prior art to arrive at the inventions specified in claims 7-9, 12, and 31-35 as expressly motivated by Bergman, such as to design a network for spacecraft environments [*"This invention provides an asynchronous, high-speed, fiber optic local area network originally developed for tactical environments, such as military*

field communications systems, but having additional specific benefits for other environments such as spacecraft and the like." (column 3, lines 11-34)].

18. **Claims 10-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,499,006 to Rappaport in view of US Patent No. 5,821,937 to Tonelli, further in view of "CADDstar Version 5.0 Help Manual" by Hal-Tec Corporation as applied to claim 1 above, and further in view of US Patent No. 5,761,432 to Bergholm et al., hereafter referred to as Bergholm.**

Regarding claims 10 and 11, Rappaport in view of Tonelli, further in view of "CADDstar Version 5.0 Help Manul" teaches the limitations of claim 1.

Bergholm teaches a planned deployment including identification of an instance with an owner (column 2, lines 39-63; column 4, lines 13-24).

Bergholm and Rappaport in view of Tonelli, further in view of "CADDstar Version 5.0 Help Manual" are analogous art because both are directed to network design.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Bergholm with Rappaport in view of Tonelli by incorporating the attributes described by Bergholm, including ownership of the network equipment, in the computer parts database of Rappaport. The motivation to do so is expressly provided by Bergholm, such as to apprise network builders of inventory information and designing links to implement orders (Bergholm, column 1, lines 55-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Bergholm with Rappaport and Tonelli to arrive at the invention specified in claims 10 and 11.

19. **Claims 13, 14 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "Modelling Multiple View Of Design Objects In A Collaborative Cad Environment" by Rosenman in view of US Patent No. 6,499,006 to Rappaport, further in view of US Patent No. 5,821,937 to Tonelli.**

Regarding claim 13, Rosenman teaches a first computer including a first memory storage device having application software encoded therein; a second computer, operatively connected to said first computer, having a second memory storage device adapted to record first project data; and a third computer, operatively connected to said second computer, having a third memory storage device adapted to record second project data, said first and second project data being substantially instantaneously identical (pages 21-23, "Computer-Supported Collaborative Design");

Said software including a catalog portion being adapted to receive data defining a plurality of communication network components (page 22, "Design Object Database System");

Said first data including a logical model (pages 21-23, "Computer-Supported Collaborative Design").

Rosenman does not explicitly teach the claimed "design profile portion," "calculations portion," or "detail drawing portion."

Rappaport teaches a design profile portion adapted to receive data defining a plurality of design rules related to logical design of a network [*"Each component utilizes electromechanical information available from the parts list library that fully describes the component in terms of its physical operating characteristics (e.g., the noise figure, frequency, radiation characteristics, etc.). This information is directly utilized during the prediction of wireless system performance metrics."* (column 6, lines 26-60)].

Rappaport teaches a calculations portion adapted to calculate power and signal relationships within a communications network components (column 7, lines 10-27; column 4, lines 13-32, etc.). Rappaport teaches a multiple dwelling unit (FIG. 3, etc.).

Tonelli teaches an integrated detail drawing portion adapted to record a separately identified detailed layout of a network within a multiple dwelling unit [(FIG. 31); *"For example, devices and media connections may be grouped into collections (logical partitions) to simplify working with complex network designs. Physically, a collection is a design sheet. Multiple collections may be linked to each other via off-page connections between their corresponding design sheets. Each collection is represented as an icon when collapsed, and when the user double clicks the left mouse button on an icon, the design sheet corresponding to the icon is displayed in the application window. Referring to FIG. 31, the devices and media connections on each floor of an office building 326 are grouped into separate collections 320, 322, 324. The user imported a country map 328 and populated the country map with multiple building collections 326, 330, 332. The user may also import a world map and populate it with country collections (not shown). Design sheets are hierarchical."* (column 15, lines 22-67)]

Rosenman, Rappaport, and Tonelli are all analogous art because all are drawn to CAD.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Rappaport with Rosenman as expressly motivated by Rappaport, such as to simplify the design task [*"Using the present method, it is now possible to assess the performance of a wireless communication system to a much higher level of precision than previously possible... The design of wireless communication systems is often a very complex and arduous task, with a considerable amount of effort required to simply analyze the results of predicted performance."* (column 5, liens 52-65)]. It would have been obvious to a person of ordinary skill in the art to combine the teachings of Tonelli with Rosenman in view of Rappaport as expressly motivated by Tonelli, such as to design or maintain a complex network layout with the ability to view details down to the individual device [*"An important aspect of designing and maintaining networks is being able to quickly assess the current network configuration down to the device configuration level. Such information is helpful in troubleshooting network problems and in updating a network system."* (Tonelli, column 2, lines 16-22)].

Therefore it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of the prior art to arrive at the invention specified in claim 13.

Regarding claim 14, Tonelli teaches that said communications network comprises an optical fiber portion (FIG. 13a, "Fiber Optic Cable" and related disclosure).

Regarding claim 16, Rappaport teaches a software method for designing a network comprising a wireless communication portion (column 5, lines 52-65).

20 **Claim 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "Modelling Multiple View Of Design Objects In A Collaborative Cad Environment" by Rosenman in view of US Patent No. 6,499,006 to Rappaport in view of US Patent No. 5,821,937 to Tonelli as applied to claim 14, further in view of US Patent No. 4,866,704 to Bergman.**

Regarding claim 15, Rosenman in view of Rappaport, further in view of Tonelli does not explicitly teach an optical fiber portion comprising an optical cable having a buffer with first and second optical fibers, wherein the fibers have different nominal characteristics.

Bergman teaches a fiber optic network with buffers and different nominal characteristics (title, abstract, columns 1-2, etc.)

Bergman and Rosenman in view of Rappaport, further in view of Tonelli are analogous art because both are drawn to communications networks.

It would have been obvious to a person of ordinary skill in the art to combine the teachings of the prior art to arrive at the invention specified in claims 14-15 as expressly motivated by Bergman, such as to design a network for spacecraft environments [*"This invention provides an asynchronous, high-speed, fiber optic local area network originally developed for tactical environments, such as military field communications systems, but having additional specific benefits for other environments such as spacecraft and the like."* (column 3, lines 11-34)].

21. **Claims 1, 3-16, and 31-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over "CADDstar version 5.0 help manual" by Hal-Tec Corporation in view of US Patent No. 5,821,937 to Tonelli et al., hereafter referred to as Tonelli.**

Applicants' remarks allege that "CADDstar Version 5.0 Help Manual" fails to teach "calculating an optical loss, including a loss associated with an optical fiber splice".

"CADDstar Version 5.0 Help Manual" clearly teaches these limitations. See, in particular, section "10.17 Splicing Optical Fibers" and Figures 10.17.3 and 10.17.1.

Applicants' remarks distinguish claims 1 and 13 from the "CADDstar version 5.0 help manual" by way of the "detail drawing" limitation.

Tonelli teaches a "separately identified detail drawing" [(FIG. 31); *"For example, devices and media connections may be grouped into collections (logical partitions) to simplify working with complex network designs. Physically, a collection is a design sheet. Multiple collections may be linked to each other via off-page connections between their corresponding design sheets. Each collection is represented as an icon when collapsed, and when the user double clicks the left mouse button on an icon, the design sheet corresponding to the icon is displayed in the application window. Referring to FIG. 31, the devices and media connections on each floor of an office building 326 are grouped into separate collections 320, 322, 324. The user imported a country map 328 and populated the country map with multiple building collections 326, 330, 332. The user may also import a world map and populate it with country collections (not shown). Design sheets are hierarchical."* (column 15, lines 22-67)]

"CADDstar version 5.0 Help Manual" and Tonelli are analogous art because both are drawn to CAD.

Therefore, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Tonelli with "CADDstar version 5.0 Help Manual" as expressly motivated by Tonelli, such as to design or maintain a complex network layout with the ability to view details down to the individual device [*"An important aspect of designing and maintaining networks is being able to quickly assess the current network configuration down to the device configuration level. Such information is helpful in troubleshooting network problems and in updating a network system."* (Tonelli, column 2, lines 16-22)].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Proctor
Examiner
Art Unit 2123

jsp

/Paul L Rodriguez/
Supervisory Patent Examiner, Art Unit 2123